

REVIEW OF NATIONAL RABIES CONTROL EFFORTS: TANZANIA

JUSTINE ALPHONCE ASSENGA (MALF)

GODSON P. MARKALIO (MoHCDGEC)

HISTORY OF RABIES AND CURENT SITUATION

- Rabies in Tanzania was first documented in the 1930s and ever since the disease has never been eradicated.
- According to the Health Protection Agency (HPA) on the level of rabies risk, by country, Tanzania is ranked as a high risk area
- Laboratory surveillance reports: Between 2009 and 2013, 245 rabies samples were received at the CVL from all the nine (9) ZVC's in the country. The data shows an average of 67.76% positivity rate over the period (The high proportion suggests that the laboratory surveillance system captures the cases which have a high clinical indicator of disease)

CASES DETECTED IN LAB AND CLINICALLY

- **In 2015**

Animal/human	No positive	No negative
Dogs	16	144
Cat		1
Wildlife	1	2
Humans	4(clinically confirmed positive	

- **In 2016**

Animal/human	No positive	No negative
Dog	9	17
Wildlife	1	1
Livestock	1	
Human	26 (clinically confirmed positive	(10 died)

CURRENT SITUATION

- In animals the diagnostic test performed was FAT, which is done at CVL
- At lower level they use syndromic diagnosis

In humans

- Rabies is notifiable in Tanzania
- There is a specific case definition for rabies
(An acute neurological syndrome (encephalitis dominate))

HISTORY OF RABIES AND CURENT SITUATION CONT

- Tanzania imports cell culture based animal and human anti rabies vaccines (Table 1)
- **Table 1:** Doses of animal and human rabies vaccine imported between 2008 – 2014

Year	Animal Rabies Vaccine	Human Rabies vaccine
2008	4000000	5000
2009	10901000	2059250
2010	14,901,000	43804
2011	25,802,000	2001400
2012	0	1000400
2013	51510000	1204968
2014	1000	3071750
Total	107,115,000	9,386,572

- In 2015: 130,000 doses for animals were donated to the government and 100,000 doses were purchased
- 2016: 316,000 doses for animals were donated to the government
- In 2015: 80,000 doses of human rabies vaccines have been purchased by the government
- In 2016: 125,000 doses were purchased by the government

Legislation and policy support (Animals)

- Compulsory rabies vaccination (Project area); Rabies prevention and control ; Animal bite reporting ; import/export of animals; Outbreak declaration and response
- **Humans** : Compulsory PEP admin after a bite case; animal bite reporting; outbreak declaration and response

- Currently, rabies surveillance is carried out by two separate systems: MAF called Animal Disease Surveillance and MoHCDGEC called Integrated Disease Surveillance Response (IDSR)
- Although rabies in animals is a notifiable disease, surveillance is primarily passive.
- Suspected cases of rabies in the district are reported to the District Veterinary Officer (DVO) who immediately notifies the Director of Veterinary Services (DVS)
- There are eight zonal veterinary investigation centres (ZVIC) in mainland Tanzania namely; (Mtwara, Temeke, Mpwapwa, Tabora, Iringa, Mwanza, Sumbawanga and Arusha) and another one in Zanzibar – the Zanzibar Veterinary Investigation Center (ZVIC).

- Rabies suspected samples are collected across the country and submitted to the ZVC's or directly to CVL.
- Reporting system from lower levels is dominantly paper based.
- At the Ministry headquarter levels, this information is later entered into TAD info system.
- Later these reports are entered into LIMS to enable report sharing among countries within SADC region and for AU/EAC and OIE they are entered into ARIS-2 and WAHIS respectively.

- Rabies is a priority disease under the Integrated Disease Surveillance Response (IDSR) system.
- Health facilities reports dog bite cases to the districts, regional then to the national level
- There is sharing of information between animal and human health sectors (communication through email, meetings and telephone calls)

Challenges of Rabies Control Activities

- There is limited supply of animal rabies vaccines in the animal sector and also inadequate PET and PEP biologics in public health.
- Inadequate laboratory capacity
- Inadequate Surveillance system
- Inadequate local research on rabies
- Low public awareness on rabies prevention and control
- Inadequate inter-sectoral collaboration and partnerships
- Inadequate enforcement of laws and regulations
- Funding constraints

SARE stage of Tanzania

- Progress made since the last PARCON meeting:
 - The country has moved from stage 0 to 1
 - In order to harmonize rabies prevention and control activities among public and private actors the government has formulated the Tanzania National Rabies Control Strategy.
 - The strategy is in line with Tanzania Livestock Policy, Tanzania Livestock Sector Development Strategy that ensures protection of the environment, society and the economy from the risks of zoonotic diseases.
 - The strategy will make country to move into stage 2.
 - Strategy will be launched soon this February 2017.

ACHIEVEMENTS

- The country is implementing BMG funded through WHO pilot rabies demonstration project implemented in Mtwara, Lindi, DSM, Coast and Morogoro regions of Tanzania and Pemba islands.
- The sustained coverage of the project at >70% the recommended level needed to prevent rabies outbreak
- The economic benefit from this project is elimination of rabies in the animal reservoir will result from saving human lives, elimination of expenditures on human PEP, and additional earnings and from livestock whose death is prevented.
- Under rabies control project:
 - -Free parenteral mass dog and cat vaccination campaign against rabies

- -Provision of free PEP and RIG across the project area (Provided by 24 districts with the total of 66 health facilities)
- Training on management of bite wounds
- Public education (avoid animal bites)
- **Other Project:**
- **Serengeti National Park:** There have been efforts to control rabies to protect wildlife in the Serengeti National Park through vaccination of dogs to prevent transmission of the disease to the wildlife.

Other efforts by NGOs:

- There have been several efforts by non-governmental organizations to control rabies through dog vaccinations, dog population management and advocacy.
- Most of these efforts are around the north and lake zones (Meru DC, Arusha City, Kahama and Shinyanga).
- Other NGOs have been involved in the Isles, such as the World Animal Protection efforts in Unguja, Zanzibar.

Next step need to be addressed before 2018

- Implementation of Dog vaccination in zone A and B of SARE framework
- Sensitization in zone B and zone 1 of SARE framework
- **Zone A**-This is the current BMGF funded rabies
- **Zone B: The Serengeti Carnivore Project Area**-This area covers eleven (11) LGAs within the Serengeti Ecosystem.
- **Zone One**:- This area will cover an area surrounding the present BMGF project
- Strengthen rabies surveillance using OH approach
- Strengthening institutional capacity for control and eventual elimination of rabies
- Conduct advocacy communication and social mobilization on rabies

Prevention of human rabies

- Early and appropriate post-exposure treatment; Pre-exposure vaccination; Training of the public and public health workers on proper bite wound cleaning and management; finalization and implementation of a primary school animal welfare curriculum.
- Enhance partnership and intersectional collaboration
- Enhance resource mobilization for rabies control and elimination
- Strengthen mechanism for monitoring and evaluation of rabies control programme

Prevention of human rabies cont...

- The country has 'The National Rabies Control Strategy'
- The national plan is based on SARE and not publicly available
- This strategy is based on the stepwise approach as recommended by FAO/GARC.
- The Stepwise Approach towards Rabies Elimination (SARE) is a comprehensive risk-based model that proposes a graduated approach in the reduction of disease risk, allowing for regional or synchronized activities towards disease elimination.
- The Rabies SARE consists of six stages (stage 0 to 5).
- Tanzania is currently at stage 1